

FIG. 1

090340-034304

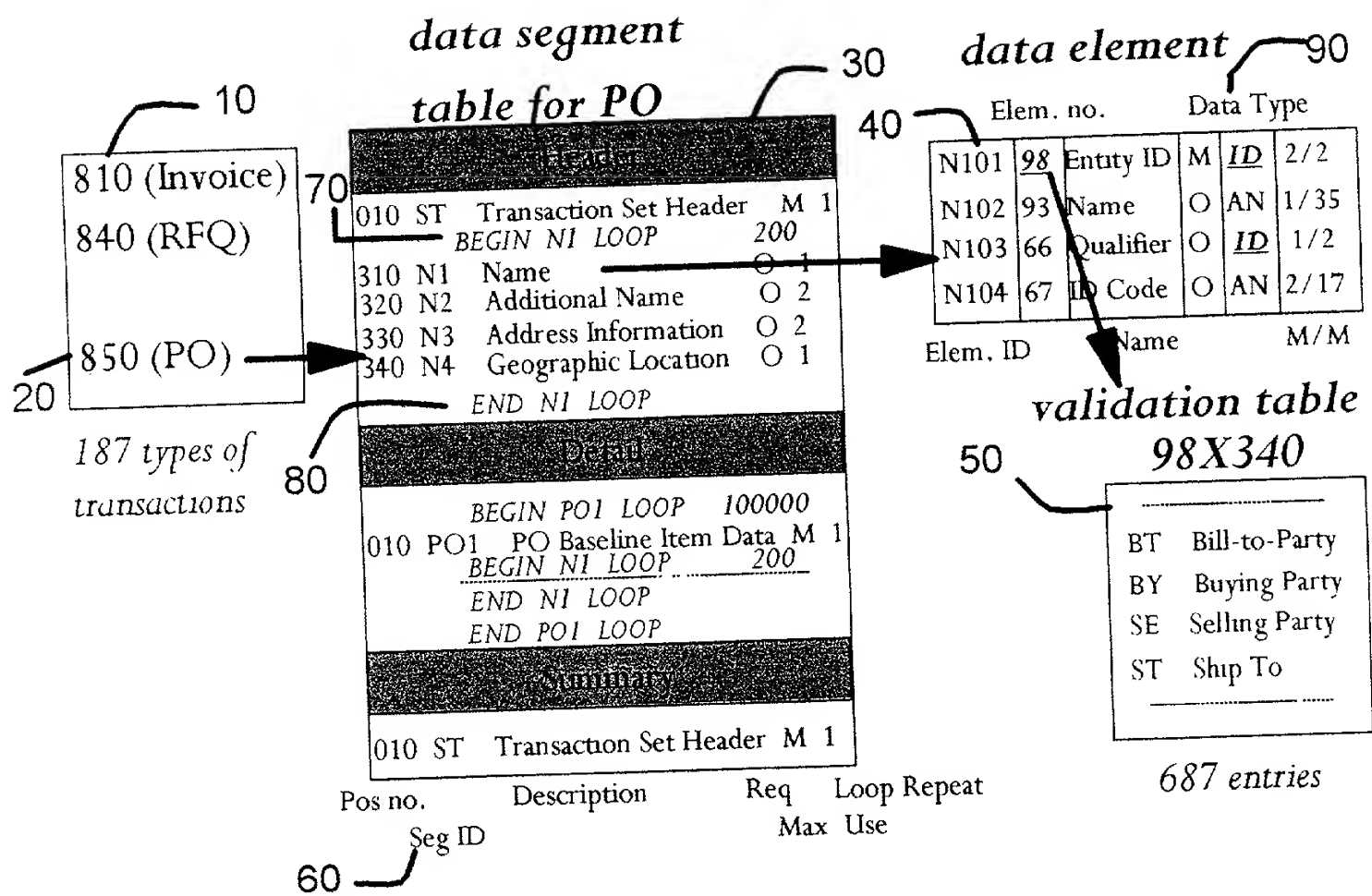


FIG. 2A

SE*12*0005@

CTT: Transaction Totals

SE: Selling Party

FIG. 2B

<!DOCTYPE transactionSet [200
 <!ELEMENT transactionSet (name, (loop|segment)*) >
 <!ATTLIST transactionSet
 code CDATA #REQUIRED
 version CDATA #REQUIRED
 standard (X12| EDIFACT) "X12"
 >
 210
 <!ELEMENT loop ((loop | segment)*) >
 <!ATTLIST loop
 code CDATA #REQUIRED
 >
 220
 <!ELEMENT segment (name, element*) >
 <!ATTLIST segment
 code CDATA #REQUIRED
 >
 230
 <!ELEMENT element (name, value) >
 <!ATTLIST element
 code CDATA #REQUIRED
 >
 240
 <!ELEMENT name (#PCDATA) >
 250
 <!ELEMENT value (#PCDATA) >
 <!ATTLIST value
 code CDATA #IMPLIED
 >
]>

FIG. 2C

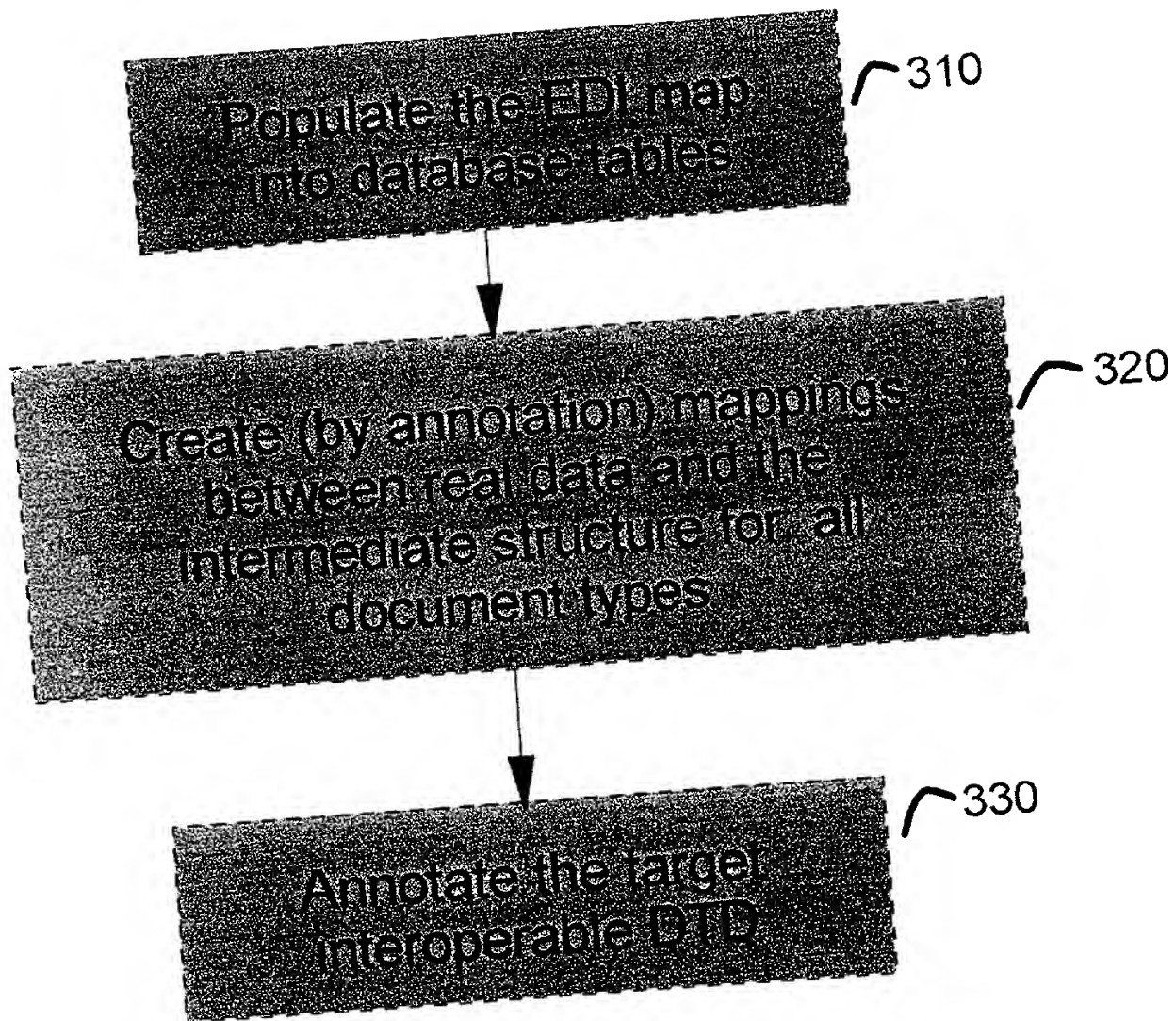


FIG. 3

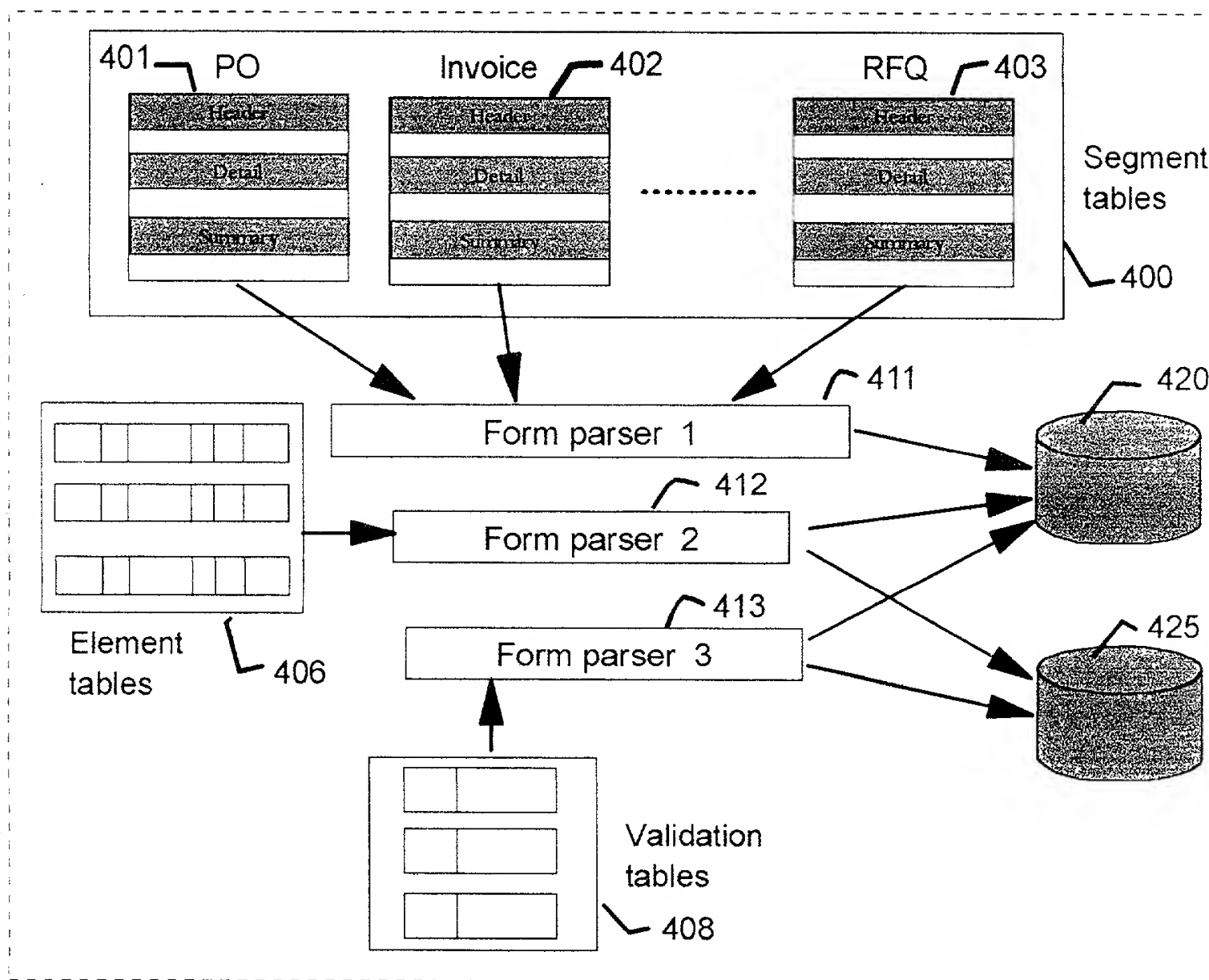


FIG. 4A

FIG. 5A

500 MAP	502 CODE	504 POS	506 CHOICE	508 TYPE	510 NAME
TS850	ST	0010	segment		Transaction Set Header
TS850	BEG	0020	segment		Beginning Segment for PO
TS850	REF	0050	segment		Reference Numbers
TS850	LOOP_N1	0301	loop		N1
TS850	LOOP_PO 1	1010	loop		PO1
TS850	CTT	2010	segment		Transaction Totals
TS850	SE	2030	segment		Transaction Set Trailer
LOOP_N1	N1	0310	segment		Name
LOOP_N1	N2	0320	segment		Additional Name Information
LOOP_N1	N3	0330	segment		Address Information
LOOP_N1	N4	0340	segment		Geographic Location
LOOP_PO 1	PO1	1010	segment		Baseline Item Data
LOOP_PO 1	LOOP_PID	1050	loop		PID
LOOP_PID	PID	1050	segment		Product/Item Description
ST	143		element	ID	Transaction Set ID Code
ST	329		element	A N	Transaction Set Control Number
N1	98		element	ID	Entity Identifier Code
N1	93		element	A N	Name
N1	66		element	ID	ID Code Qualifier
N1	67		element	A N	ID Code

FIG. 5A

520	ELEMENT	522	524	425
ID	CODE	VALUE		
143	810	X12 Invoice		
143	850	X12 Purchase Order		
530	98	BT	Bill-To-Party	
		540	550	
531	98	BY	Buying Party	
		541	551	
532	98	SE	Selling Party	
		542	552	
533	98	ST	Ship To	
		543	553	
66	1	D-U-N-S Number, Dun & Bradstreet		
66	8	Vendor UPC Code		
66	9	D-U-N-S+4, D-U-N-S Number with 4 Character Suffix		
66	92	Assigned by Buyer or Buyer's Agent		

FIG. 5B

FIG. 5A

610 level	600 segment element/code	602 repeat	604 annotation	606 description	608 label
	1 ST		x:=row(PO,poid,in0)	650 Transaction Set Header	ST 653
	2 ST01/143		"850" 628	651 ID Code	ST@143
	2 ST02/329		in0	652 Control Number	ST@329
620	1 LOOP_N1	*	y:=row(company,coid,x.buyer)	N1/BUYER	LOOP_N1
	2 N1			Name	LOOP_N1@N1
	3 N101/98		"BY" 621 630	Entity ID	LOOP_N1@N1@98
	3 N102/93		y.name	Name	LOOP_N1@N1@93
	2 N4			Geographic Location	LOOP_N1@N4
	3 N402/156		y.addr 629	State	LOOP_N1@N4@156
622	1 LOOP_N1	*	y:=row(company,coid,x.seller)	N1/SELLER	LOOP_N1
	2 N1			Name	LOOP_N1@N1
	3 N101/98		"SE" 623 635	Entity ID	LOOP_N1@N1@98
	3 N102/93		y.name	Name	LOOP_N1@N1@93
	2 N4			Geographic Location	LOOP_N1@N4
	3 N402/156		y.addr	State	LOOP_N1@N4@156
625	1 LOOP_PO1	*	z:=row(lineitem,poid,in0)	PO1/Line ItemInfo	LOOP_PO1
	2 PO1			Base Line Item	LOOP_PO1@PO1
	3 PO101/350		z.prodid 640	ID	LOOP_PO1@PO1@350
	3 PO102/330		"1" 642	Quantity	LOOP_PO1@PO1@330
	3 PO104/212		z.amount	Unit Price	LOOP_PO1@PO1@212
627	2 LOOP_PID	*	w:=row(product,prodid,z.prodid)	PID/Descriptions	LOOP_PO1@LOOP_PID
	3 PID			Product/Item Description	LOOP_PO1@LOOP_PID@PID
	4 PID01/349		"F" 644	Item Description Type	LOOP_PO1@LOOP_PID@PID@349
	4 PID05/352		w.name	Description	LOOP_PO1@LOOP_PID@PID@352

428

FIG. 6

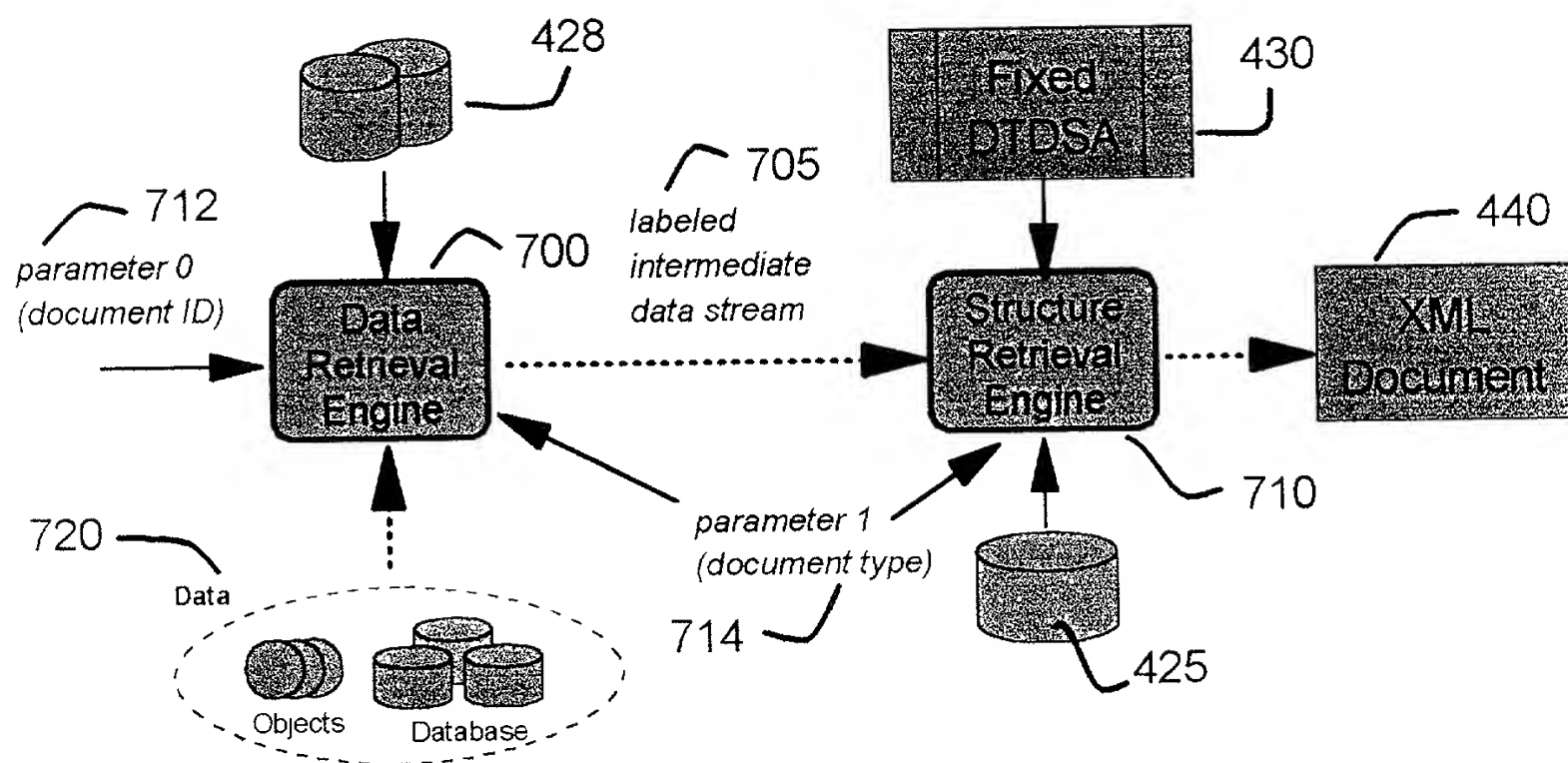


FIG. 7A

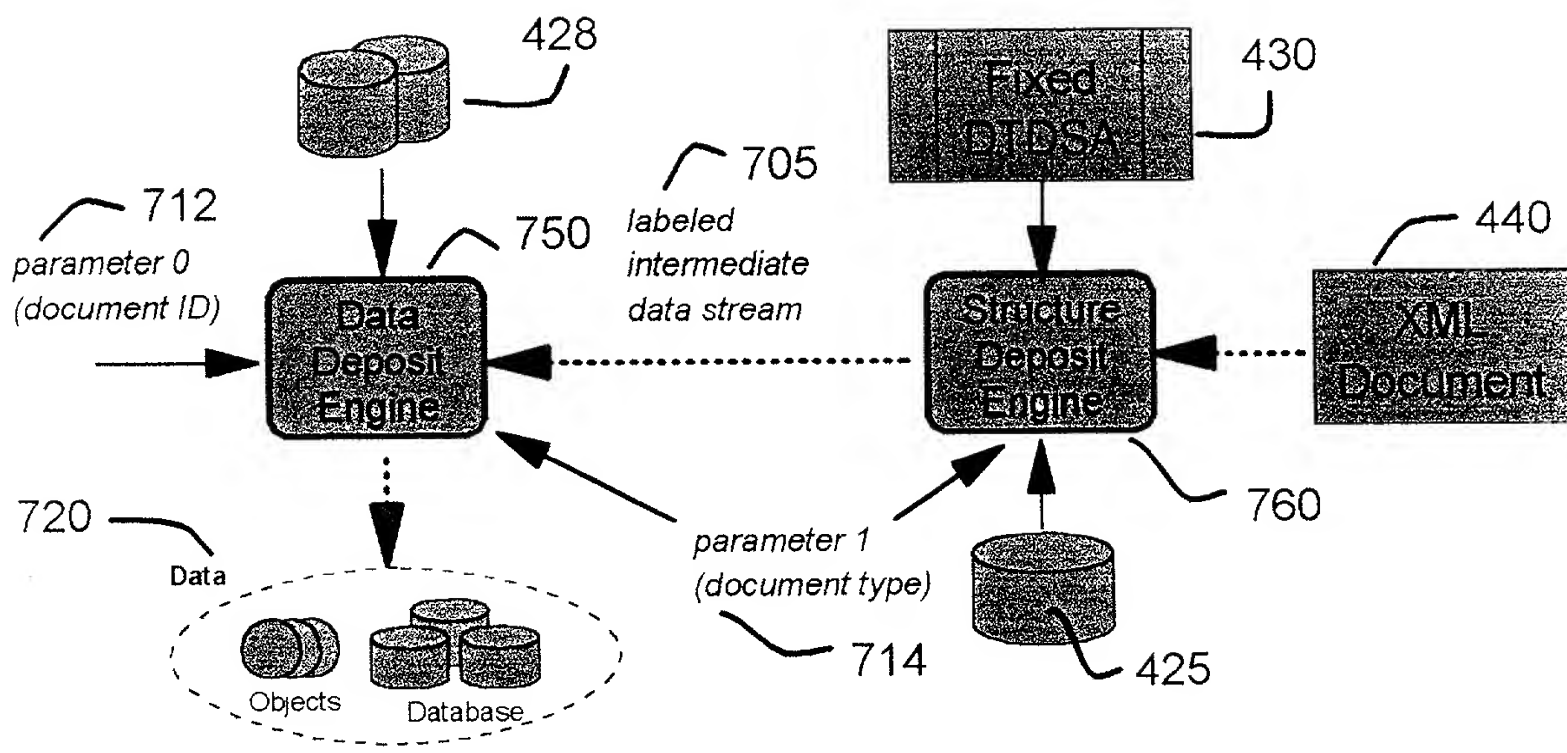


FIG. 7B

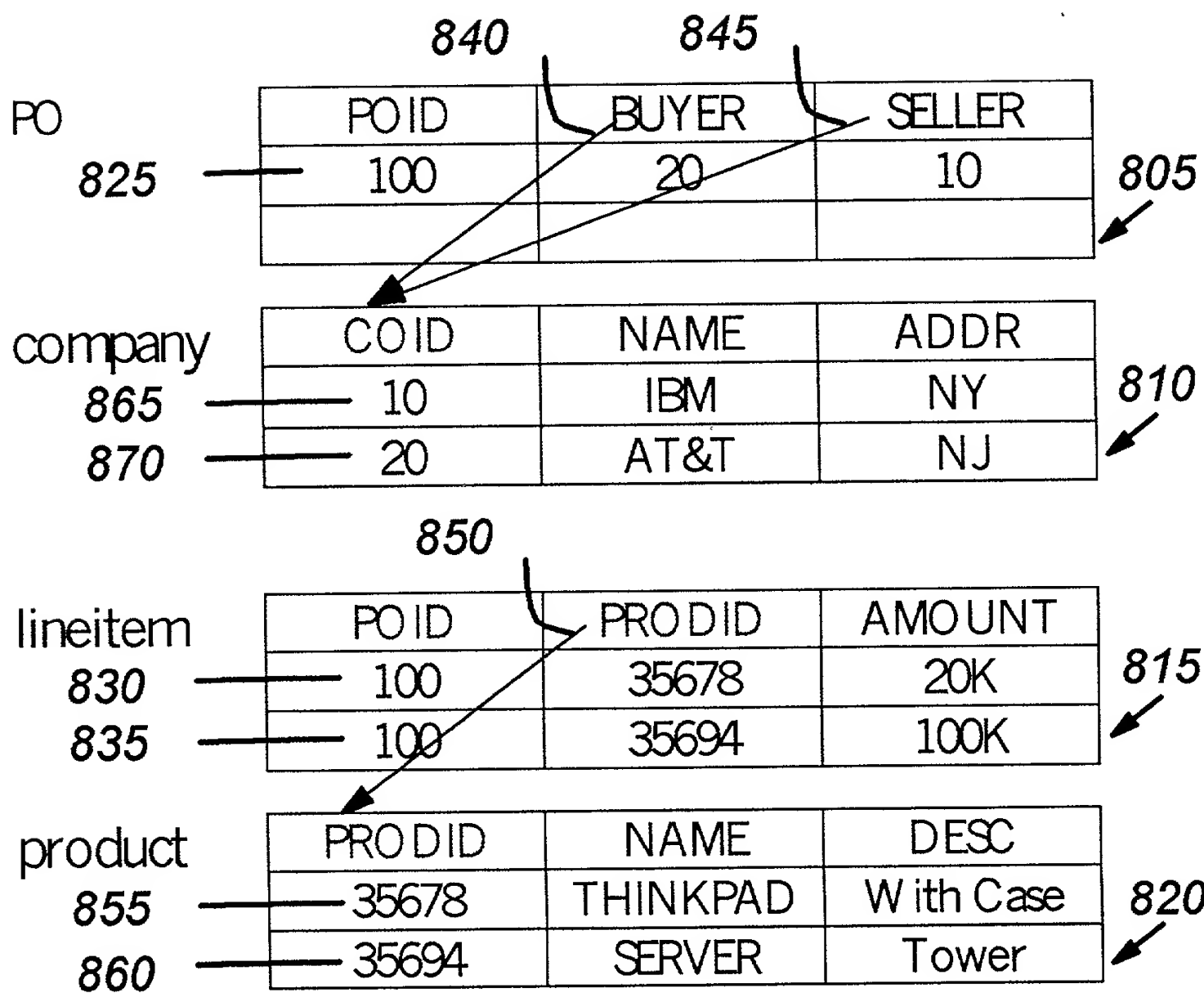


FIG. 8A

880
(ST@143, "850")
(ST@329, "100") 885

parameter 0 (in0) = "TS850"
parameter 1 (in1) = "100"

886 (LOOP_N1@N1@98, "BY")
(LOOP_N1@N1@93, "AT&T")
(LOOP_N1@N4@156, "NJ") 890
892

887 (LOOP_N1@N1@98, "SE")
(LOOP_N1@N1@93, "IBM")
(LOOP_N1@N4@156, "NY") 895

888 (LOOP_PO1@PO1@350, "35768")
(LOOP_PO1@PO1@330, "1")
(LOOP_PO1@PO1@212, "20K")
(LOOP_PO1@LOOP_PID@PID@349, "F")
(LOOP_PO1@LOOP_PID@PID@352, "THINKPAD") 896

889 (LOOP_PO1@PO1@350, "35694")
(LOOP_PO1@PO1@330, "1")
(LOOP_PO1@PO1@212, "100K")
(LOOP_PO1@LOOP_PID@PID@349, "F")
(LOOP_PO1@LOOP_PID@PID@352, "SERVER")

FIG. 8B

<transactionSet code='850' version='004010' standard='X12'>
<name>Purchase Order</name>

<segment code='ST'>

for header

</segment>

800

<loop code='N1'>

for buyer

</loop>

802

<loop code='N1'>

for seller

</loop>

804

<loop code='PO1'>

first line item

</loop>

806

<loop code='PO1'>

second line item

</loop>

808

</transactionSet>

FIG. 8C


```
<segment code='ST'> 650
  <name>Transaction Set Header</name>
  <element code='143'> 651
    <name>ID Code</name> 652
    <value code='850'>X12 Purchase Order</value>
  </element>
  <element code='329'>
    <name>Control Number</name>
    <value>100</value>
  </element> 899
</segment>
```

800

FIG. 9A

```

<loop code='N1'>
  <segment code='N1'>
    <name>Name</name>
    <element code='98'>
      <name>Entity ID</name> 912
      <value code='BY'>Buying Party</value>
    </element> 910
    <element code='93'>
      <name>Name</name>
      <value>AT&T</value>
    </element>
  </segment>
  <segment code='N4'>
    <name>Geographic Location</name>
    <element code='156'>
      <name>State</name>
      <value>NJ</value>
    </element>
  </segment>
</loop>

```

802

```

<loop code='N1'>
  <segment code='N1'>
    <name>Name</name>
    <element code='98'>
      <name>Entity ID</name> 922
      <value code='SE'>Selling Party</value>
    </element> 920
    <element code='93'>
      <name>Name</name>
      <value>IBM</value>
    </element>
  </segment>
  <segment code='N4'>
    <name>Geographic Location</name>
    <element code='156'>
      <name>State</name>
      <value>NY</value>
    </element>
  </segment>
</loop>

```

804

FIG. 9B

```

<loop code='PO1'>
  <segment code='PO1'>
    <name>Base Line Item</name>
    <element code='350'>
      <name>ID</name>
      <value>35768</value>
    </element>
    <element code='330'>
      <name>Quantity</name>
      <value>1</value>
    </element>
    <element code='212'>
      <name>Unit Price</name>
      <value>20K</value>
    </element>
  </segment>
  <loop code='PID'>
    <segment code='PID'>
      <name>Product/Item Description</name>
      <element code='349'>
        <name>Item Description Type</name>
        <value code='F'>Free-form</value>
      </element>
      <element code='352'>
        <name>Description</name>
        <value>THINKPAD</value>
      </element>
    </segment>
  </loop>
</loop>

```

806

```

<loop code='PO1'>
  <segment code='PO1'>
    <name>Base Line Item</name>
    <element code='350'>
      <name>ID</name>
      <value>35694</value>
    </element>
    <element code='330'>
      <name>Quantity</name>
      <value>1</value>
    </element>
    <element code='212'>
      <name>Unit Price</name>
      <value>100K</value>
    </element>
  </segment>
  <loop code='PID'>
    <segment code='PID'>
      <name>Product/Item Description</name>
      <element code='349'>
        <name>Item Description Type</name>
        <value code='F'>Free-form</value>
      </element>
      <element code='352'>
        <name>Description</name>
        <value>SERVER</value>
      </element>
    </segment>
  </loop>
</loop>

```

808

FIG. 9C

<!DOCTYPE BUYERS [1000
 1020— <!ELEMENT BUYERS(buyer)* :: r:=row(**buyers**) > 1005 1030
 1021— <!ELEMENT buyer (ID, name, address, itemname, buyDate)> 1010
 1035— :: x:=row(**company**, <coid>, <field(buyers, buyerid, r)>)>
 1022— <!ELEMENT ID (#PCDATA : field(buyers, buyerid, r))> 1007 1006
 1023— <!ELEMENT name (#PCDATA : field(company, name, x))> 1011
 1024— <!ELEMENT address (#PCDATA : field(company, addr, x))> 1012
 1025— <!ELEMENT itemname (#PCDATA : field(buyers, itemname, r))>
 1026— <!ELEMENT buyDate (#PCDATA : field(buyers, buyday, r))> 1008
]> 1040 1009

FIG. 10A

1050 <BUYERS>
 <buyer>
 <ID>1</ID> 1055
 <name>IBM</name> 1056
 <address>NY</address> 1057
 <itemname>copy machine</itemname> 1058
 <buyDate>07/04/2000</buyDate> 1059
 </buyer>
 <buyer>
 <ID>2</ID>
 <name>HP</name>
 <address>CA</address>
 <itemname>smart card</itemname>
 <buyDate>12/25/2000</buyDate>
 </buyer>
</BUYERS>
1060

FIG. 10B

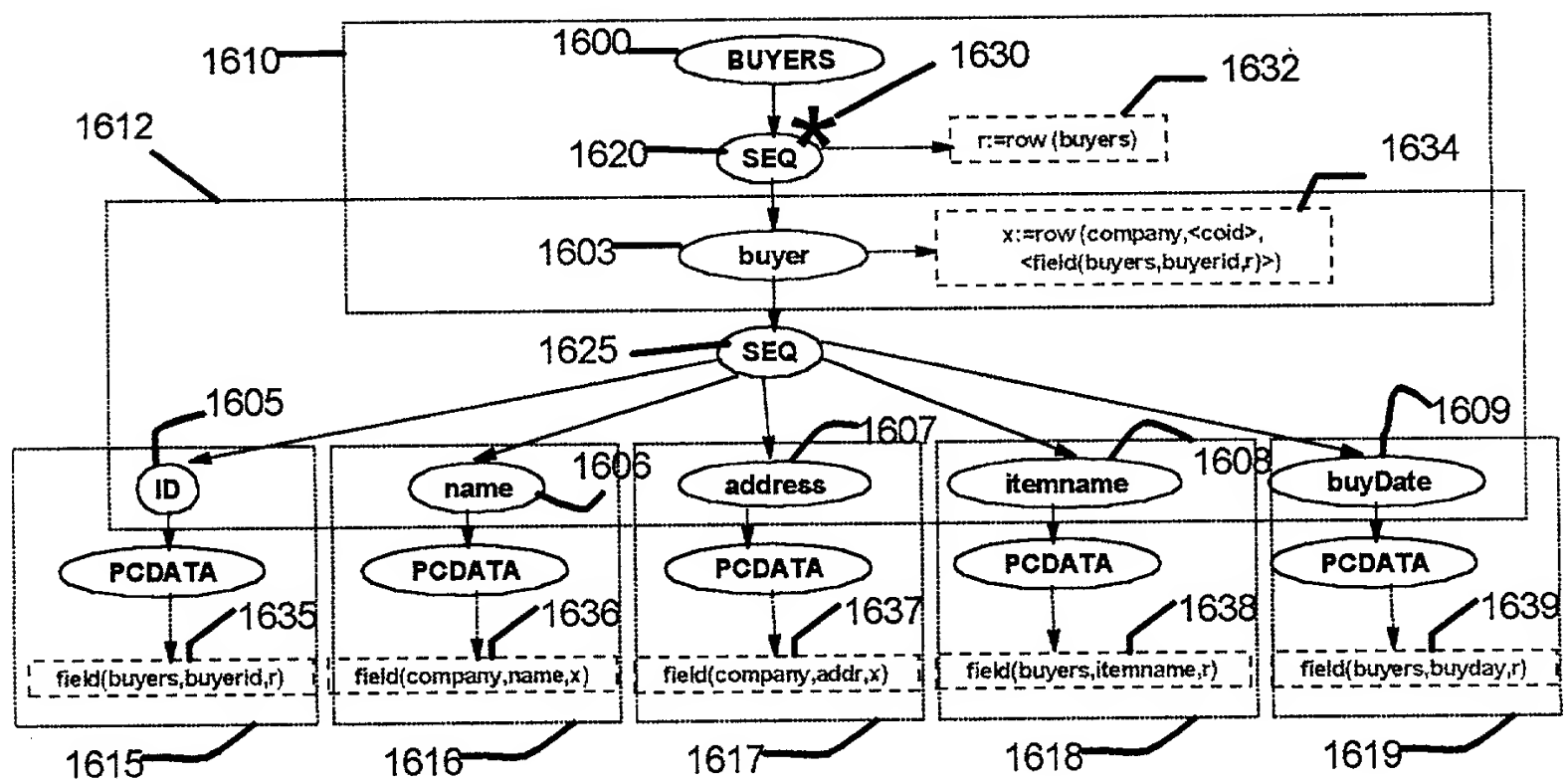


FIG. 11A

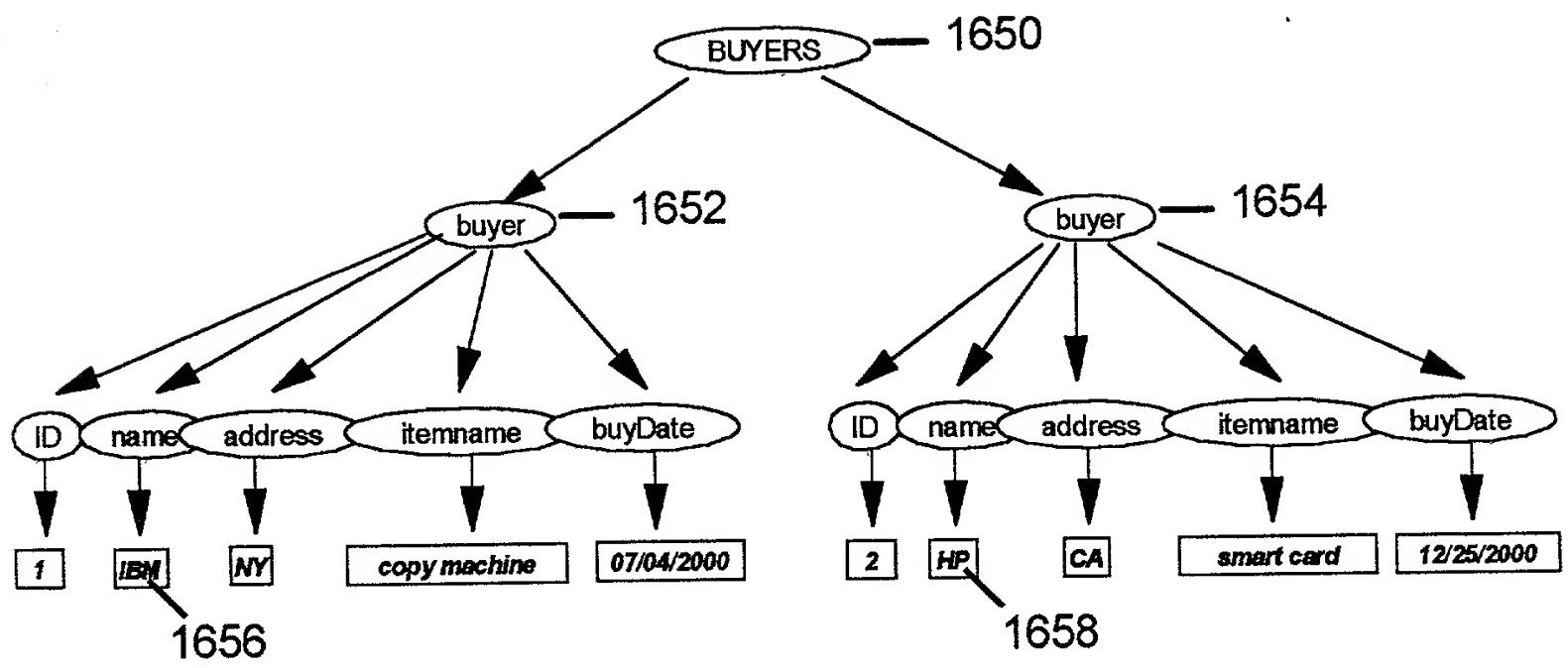


FIG. 11B

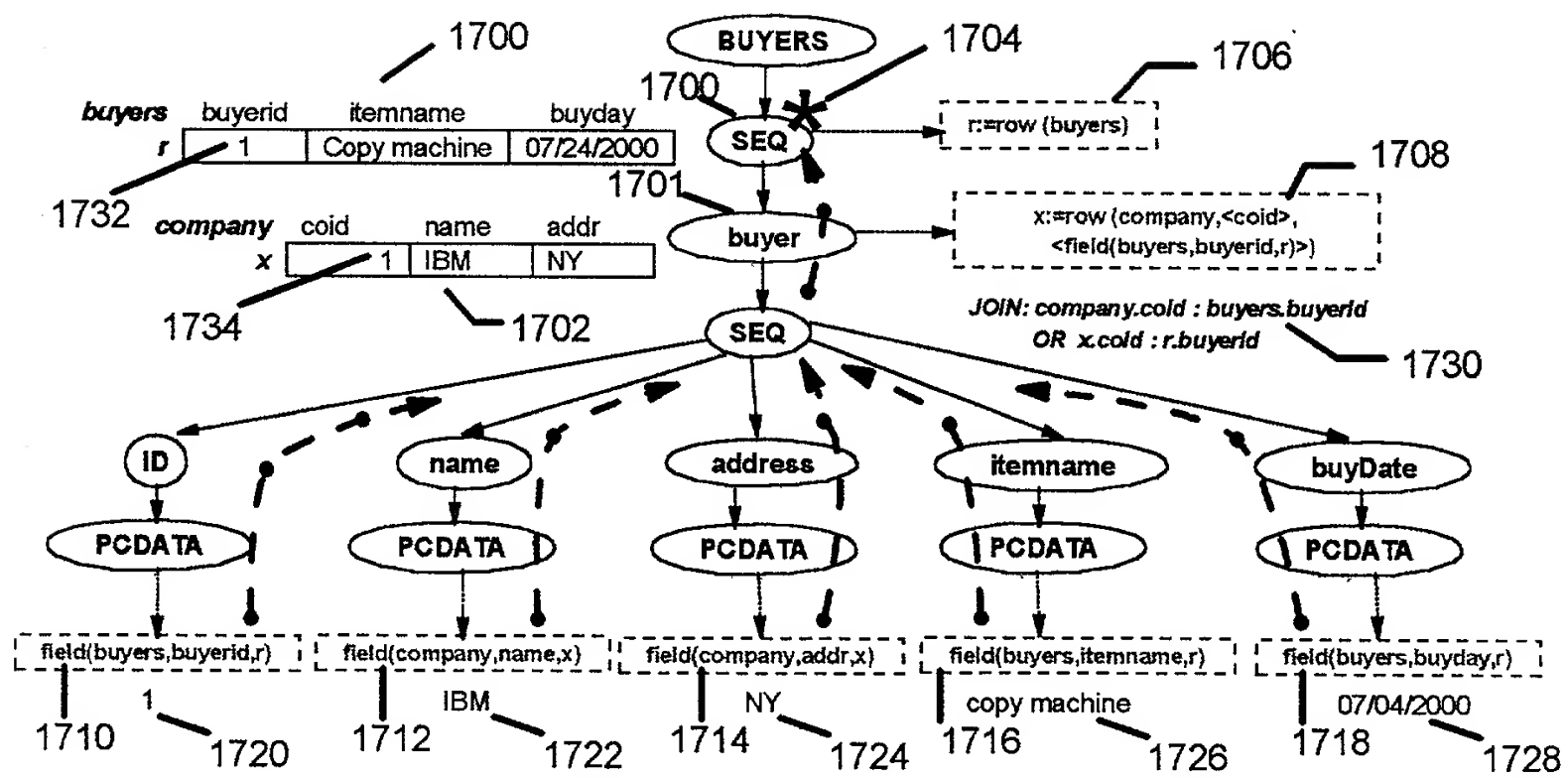


FIG. 12A

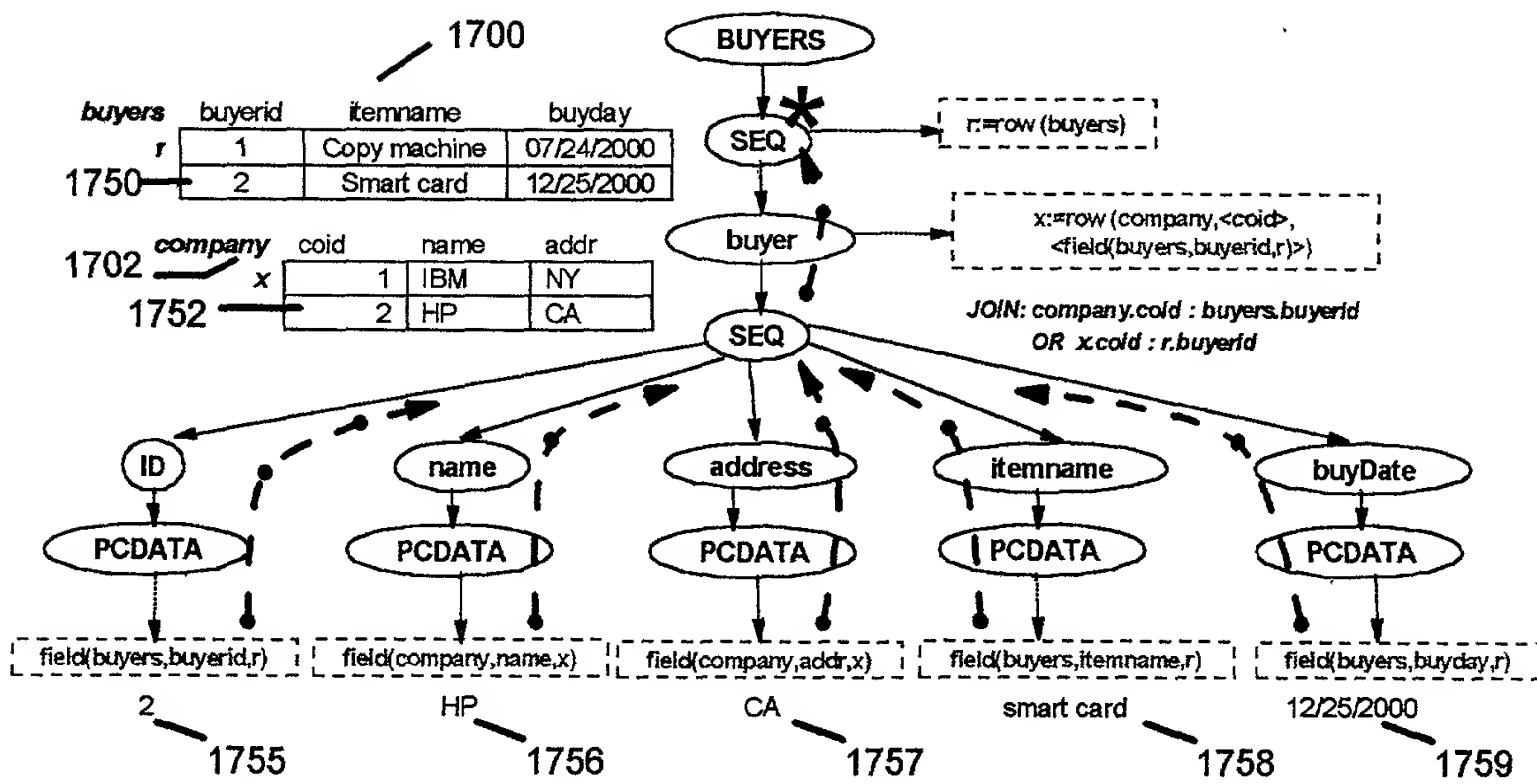


FIG. 12B

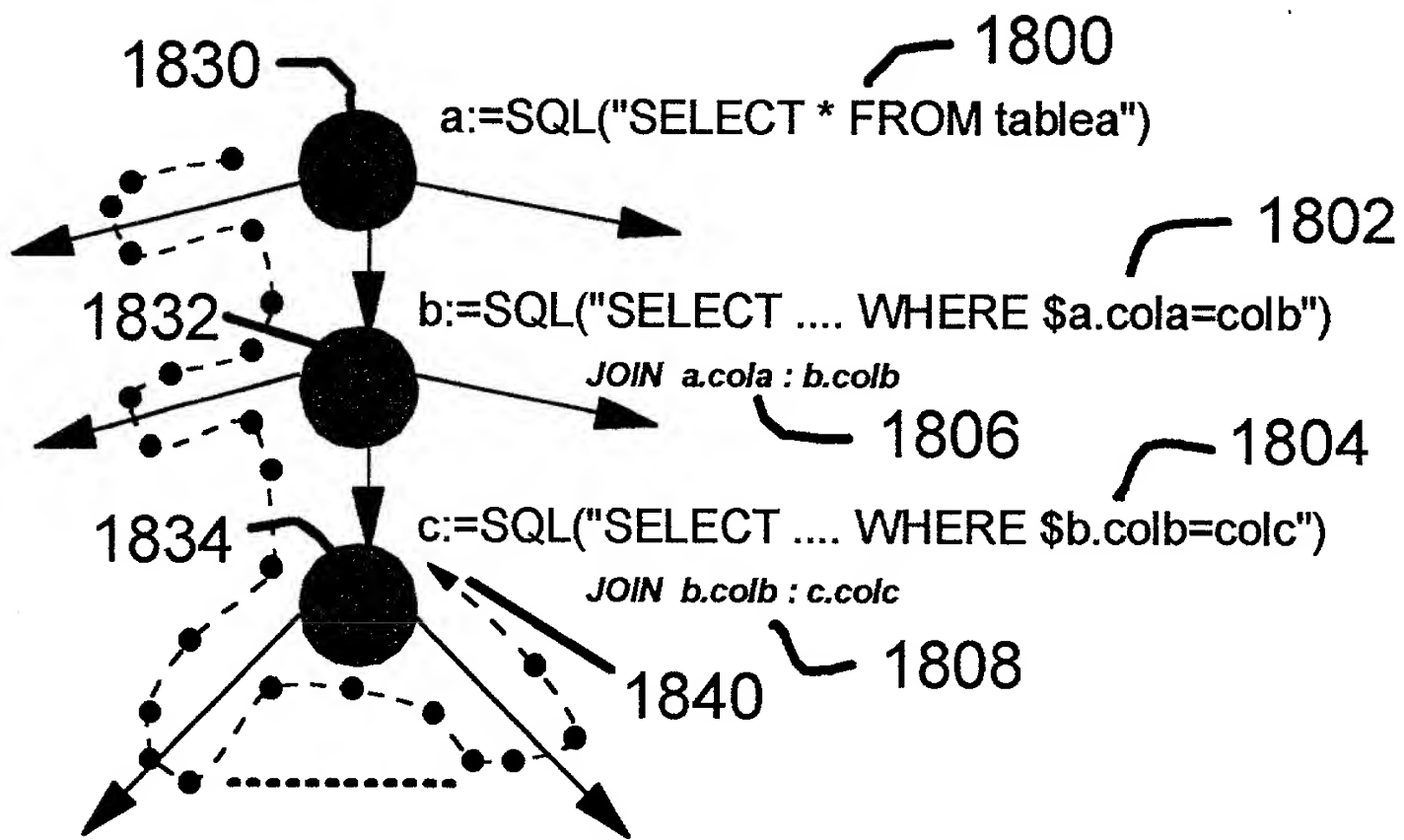


FIG. 13

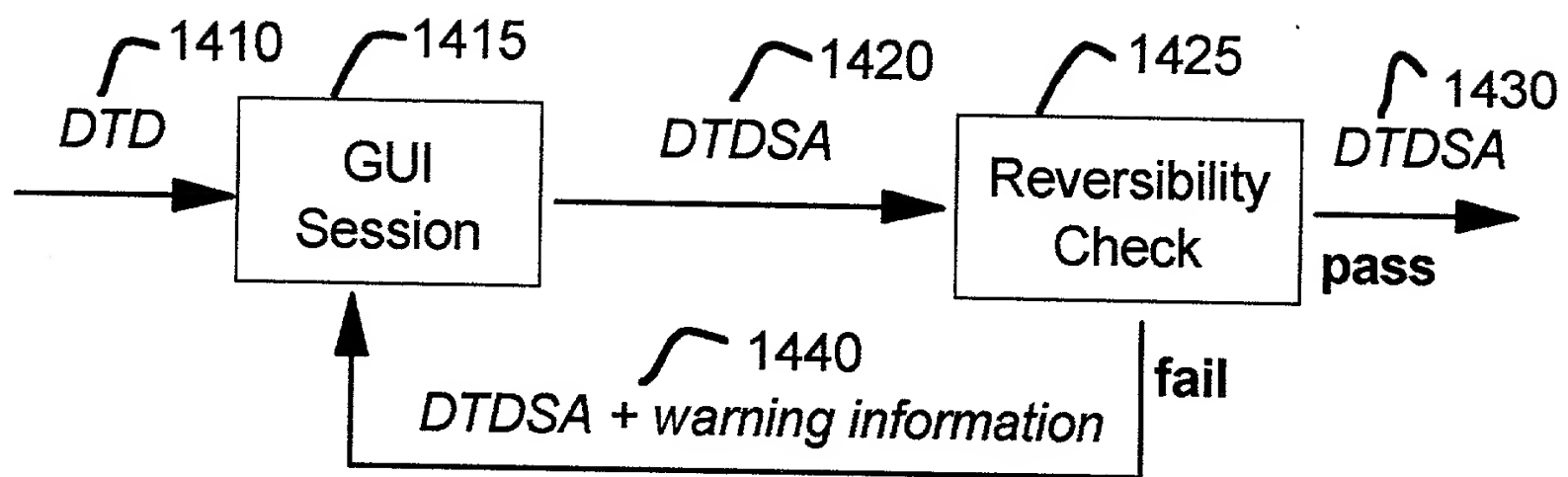


FIG. 14